

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES 1 14	
2. AMENDMENT/MODIFICATION NO. 0003		3. EFFECTIVE DATE 20-Jun-2003		4. REQUISITION/PURCHASE REQ. NO. 37170091		5. PROJECT NO.(If applicable)	
6. ISSUED BY NAVAL SURFACE WARFARE CENTER, CARDEROCK CODE 3352, ROBERT COLOT 5001 SOUTH BROAD ST PHILADELPHIA PA 19112-1403		CODE N65540		7. ADMINISTERED BY (If other than item 6) See Item 6		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				X		9A. AMENDMENT OF SOLICITATION NO. N65540-03-R-0006	
				X		9B. DATED (SEE ITEM 11) 14-May-2003	
						10A. MOD. OF CONTRACT/ORDER NO.	
						10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input checked="" type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u> 1 </u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
A.THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.							
B.THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).							
C.THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
D.OTHER (Specify type of modification and authority)							
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) 1. The hour and date for receipt of offers is extended to 4:00 P.M., 14 July 2003.							
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 22-Jun-2003	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

2. The following paragraphs provide additional contractor questions regarding the solicitation and the Government's answers to the questions:

Q10. Background: The generator sets on the MCM ships 1 and 2 are built to rotate in SAE clockwise direction. Since SAE standard is counter clockwise this presents a significant challenge to potential suppliers to the MCM/MHC Repowering solicitation. Few engines in this size class are offered with opposite rotation capability.

Question: Is the existing generator on MCM 1 & 2 capable of counter clockwise rotation? Generators with zero degree pitch angle can often be turned either direction with something as simple as a fan blade change.

A10. "The existing MCM 1 & 2 Class Generator can be modified to reverse rotation.

Offerors can propose solutions that require modification of existing shipboard systems as long as the end result is achieved and is clearly defined within the proposal. However, one of the goals of this engine conversion is to minimize impacts to existing shipboard systems. "Impact to ship systems" is covered under the technical evaluation factor of "Engine Design, Interface and Maintainability Characteristics" which will be evaluated as stated in Section M of the solicitation. The successful offeror will be required to perform any such modification of existing shipboard systems.

Proposals that include such modifications to existing ship systems shall include technical details of the required modification in the technical proposal. All costs to perform any such modification of existing ship systems must be included in the offeror's proposal."

Q11. Section 2.7.3.1 of the Technical Specification states "the complete diesel engine and other equipment mounted on the subbase shall be shock tested with the entire mounting system as configured for shipboard installation." Will the US Navy be providing any or all of these components, less the engine, as GFE for the purposes of this testing or is the intent for us to fabricate these components ourselves?

During MIL-S-901D Shock Testing of the SSDG units, there are three possible engine test configurations:

- Engine only
- Engine and mass which represents the generator
- Engine and generator

Could you please clarify what will be required? If option #3 is chosen, will the US Navy provide a generator for the test?

A11. There are currently no spare assets in the Government's inventory that could be furnished for the purpose of shock testing. The Government, therefore, will not provide any assets for the purpose of shock testing. It will be the Contractor's responsibility to either manufacture, procure or simulate the various configurations under the requirements of MIL-S-901D.

The Contractor can Shock test the Ship Service Diesel Generator either using the identical make/model generator used in the MCM and MHC applications or by simulating the mass arrangement in accordance with the requirements of MIL-S-901D. There are currently no spare assets in the Government's inventory that could be furnished for the purpose of shock testing. The Government, therefore, will not provide any assets for the purpose of shock testing.

Q12. The technical volume is to have 100 page limit with typewritten, double-spaced lines with a maximum of 10 foldouts. The requirement for only 100 pages, double-spaced with no provisions for submitting appendices for data that the customer desires will result in a proposal that does not provide what the customer needs for a full evaluation.

The provision of the examples should graphically display the impact of double spaced typing. Appendices will allow the submittal of already available data to support our statements.

We recommend that the subject requirement be changed to read 100 pages typewritten with single or 1 ½ spaced lines. (Examples of the original requirement and the results of single and 1 1.2 line spacing are attached to show impact.) It is also recommended that Appendices be permitted to allow enclosure of such data as MTBF and MTBO, Past Performance Data, and Test Reports.”

A12. The intent of double spacing is to allow enough space for the Government reviewer to make notes, etc. within the text of the proposal. The intent of the maximum page limit is to ensure that all potential offerors are bound by the same restrictions and also to limit the potential amount of materials that the Government reviewer will need to evaluate. The proposal limits provided in this solicitation are comparable to previous requirements of this magnitude and are considered adequate. Proposal requirements remain unchanged.

Q13. Paragraph (f) has slipped off the right side of the page. All that is visible is: “(f) Indir.” The definition and desires for what is assumed to be indirect labor must be provided. Please provide complete paragraph (f) on page 87 of 101.

A13. See Section 3 of this amendment.

Q14. “MCM Engine airborne noise levels shall not exceed” and “MHC Engine airborne noise levels shall not exceed.” All graphs except for the MCM Generator engines have blue data points and a blue background and are not readable. Please reissue charts in a readable format.

A14. Readable graphs are provided in MS Word format (blue data points on white background) as an attachment to this solicitation.

Q15. The requirements detailed in paragraphs above contain references to various revisions of MIL-STD-129 and – 2073. Recommend MIL STD for marking/labeling and preservation/packaging language be changed to include “or most recent” in the contract language.

A15. See section 4 of this amendment.

Q16. The reason I contacted you was to determine the scope of the retrofit for the Mine Countermeasures Ships (MCM-1) and Coastal Mine Hunters (MHC-51). Particularly interesting is whether changes to the main propulsion system, in addition to the engines, are planned. As you may know, the MCM-1 is equipped with a Voith 650 TE-XZ fluid coupling, and the MHC-51 is equipped with the Voith-Schneider propulsion system. My concerns pertain to the Voith 650 TE-XZ fluid coupling and the MCM-1. The Voith 650 TE-XZ fluid coupling was chosen based on the engine performance characteristic supplied during original construction. If the performance characteristic changes with the replacement engine, this data should be reviewed with Voith to ensure the fluid coupling is properly applied.

A16. The scope of any resultant contract DOES NOT include replacement of the MHC-51 Class Voith Schneider Cycloidal Propellers.

The scope any resultant contract DOES include replacement of the MCM-1 Class Main Propulsion Diesel engine coupling system between the engine flywheel and the input to the pedestal bearing shaft. As stated in the inquiry, the Voith 650 TE-XZ fluid coupling characteristics may not match the performance characteristics for the replacement diesel engine specific to this application. It is the offeror's responsibility to identify a suitable coupling in their proposal in accordance with Section J, Attachment 1, paragraph 2.5.13 of this solicitation.

Q17. The volume of drawing files that accompanied the solicitation is large. As our technical people are sifting through the various files to find pertinent information, they have asked if there is an index available that would help streamline their review process and quickly identify those files of highest interest.

Question: Does the program office have or can they make available a drawing/file index that can guide us through the Attachments and sub-folders to the MCM/MHC solicitation?

A17. See attached drawing index.

Q18. SECTION/PARA. L – TEC. PROP. ENGINE DESIGN PAGE 89:

“For each component, documentation shall be submitted that defines component design stresses input tabulation for component analysis, metallurgical properties, safety factor, Mean Time Between Failure (MTBF) data, failure histories, and details of ongoing component improvement programs. Design analysis shall include calculations, standards and basis of acceptance criteria used. Complete input data sheet shall be included with each component details. Design calculations for the engine components shall be accompanied by service experience and reliability indicating the probability of the components failure”

The data requested for the components listed would be of such quantity that it could not be adequately presented in a 100 page document if it is required for all applications. The verbiage is subject to interpretation as to when such documentation is required. The confusion arises as to whether the information is required for all engines or only those that do not have commercial equivalents. It is also unclear as to whether this information is that which is to be provided to ABS for certification.

Do the requirements quoted above apply to all engines and components or only those who do not have commercial equivalents?

If information is required for all engines may it be submitted as an attachment or under Separate cover and to whom?

A18. Section L, Section 2, "Engine Design" paragraph states:

“Detailed design data including engine and sub-component design data shall be submitted for Navy review. For each component, documentation shall be submitted that defines component design stresses input tabulation for component analysis, metallurgical properties, safety factor, Mean Time Between Failure (MTBF) data, failure histories, and details of ongoing component improvement programs. Design analysis shall include calculations, standards and basis of acceptance criteria used. Complete input data sheet shall be included with each component detail. Design calculations for the engine components shall be accompanied by service experience and reliability indicating the probability of the components failure. Detailed design data is required for the following components/systems:

- ? Crankcase
- ? Crankshaft
- ? Bearings
- ? Connecting Rods
- ? Cylinders, Liners, and Pistons
- ? Cylinder Through or Tie Rod Bolts
- ? Bedplate, Cylinder Block or Engine Frame
- ? Turbocharger
- ? Aftercooler and Intercooler
- ? Exhaust System
- ? Coupling and Clutch"

The Contractor must submit Engine Design data for any proposed engine regardless of whether it may have a commercial equivalent. The data will be used to evaluate the design characteristics of the proposed engines. The

required data is not intended to match all of the data required for ABS Certification, however, the information may be a subset of the submittal requirements for the post-award certification process. The Contractor may submit the "Engine Design " data as defined in Section L, Section 2 (as described above) via a separate attachment to the proposal. The attachment shall be limited to 100 pages and the size of the pages must be uniform, however, a maximum of twenty-five fold out charts or diagrams may be used. This additional 100 page attachment may only be specific to the engine design data described above. All other portions of the proposal as defined in Section L must be contained within the body of the main proposal (also limited to 100 pages). The Attachment shall be submitted with the Contractor's formal proposal.

Q19. Attachment 6 to the RFP contained Installation Drawings for the MCM and MHC ships.

We have conducted a thorough review of these drawings, and can find no reference to the MCM subbase assembly, the enclosure on the MHC, or the interface connections on both classes to which we must mount or connect our engines. It will be impossible to design, weigh or accurately price the interface adapters without this information. In addition we note that the drawings reference a specific ship. Are we to assume that it is the Government's intention to have these drawings apply to all ships of the class.

Provide the subject drawings or guidance as how to address this absence of information in the proposal.

A19. The following additional drawings are provided for interface connection details:

MCM 180-6134097 "MAIN PROPULSION ENG & REDUCTION GEAR FDNS"

233-6134142 "PROPULSION ENG / REDUCTION GEAR SUB-BASE (S)"

180-6134100 "SSDG FOUNDATIONS"

180-6900415 "SSDG RAFT MODS"

VENDOR DWG W24500037 "BASE FOR DIESEL / GEN WELDMENT"

The MHC Enclosure drawings are not provided due to the fact that the Government will require the existing enclosure to be removed under the follow on Design and Installation contract. The Contractor for the Design and Installation follow on contract will be required to meet a general noise threshold requirement. The solution may or may not require an enclosure but will require the existing enclosure to be removed.

Many of the drawings referenced are "as built" CLASS drawings and as such encompass several ships. It is the Government's intention that for the purpose of providing an estimate for re-engining the ships, that any distributive system drawing is intended to be representative of all the ships within the class (i.e. MHC or MCM). This does not mean that within each class that each system is identically arranged. Each ship within a class may have a unique arrangement that would require minor variations to the installation plan.

Q20. What length of time should the contractor logistics support and services be based?

A20. The contractor logistics services will be ordered by the Government to commence immediately following the conversion of the first ship. The logistics services would be required commencing after the first ship installation and continuing through the life of the contract. The total number of engines covered under this service will increase as the follow on ships are converted during the life of the contract.

Q21. PBL-C: In 4.0 Contractor Performance Metrics and Incentives:

What is the "Incentive" for meeting fill rate?

The solicitation also requires a database be developed and provided to the government to monitor fill rates. Doesn't the government have a system already developed to track on-time deliveries? Are you asking that we develop another system?

A21. The Logistics Services CLINs are Cost Plus Award Fee. The incentive would be a higher award fee based on performance - see cost plus award fee plan.

NAVICP monitors fill rates for their PBL contracts. This is not a NAVICP PBL contract; therefore, this contract requires vendor to monitor.

Q22. 5.2 Shipments:

What is the address of the NAVTRANS pick-up point for the CASREP/IPG 1 which are required to be delivered to in 24 hours?

Typically EDI purchase orders are processed 7 days a week. With that in mind, would the Navy still need a means to notify the contractor that a CASREP 1 order has been entered?

The solicitation requires the contractor to use GSA small package express. Is the Navy saying GSA is the only acceptable shipper or will the Navy accept packages from others, i.e. UPS?

The solicitation recommends the use of the DODAAC web site and Navtrans to identify shipping addresses. Over the past few years the DODAAC website has been turned off by the DLA for security reasons. How will addresses be provided in that type of situation?

The NAVTRANS current method of providing ship-to information is via fax. Depending on volume it may take several days to receive ship-to address from NAVTRANS. How will addresses be provided for those items requiring 24 to 48 hours delivery?

It appears the solicitation is requiring the contractor to export OCONUS bound orders. How will import duties be addressed for OCONUS shipments?

A22. NAVTRANS will pick-up material at vendors shipping dock.

Yes. Because of the criticality to the Ship's mission, CASREPS must be monitored and tracked as a separate issue.

Yes. Under NAVTRANS STS, the Navy will pick up the material at the vendors shipping dock.

NAVTRANS STS system will identify the DODAAC. The vendor must interface with NAVTRANS STS.

NAVTRANS STS has daily updates to its CRIF database. The turn around time is under 15 minutes for items under 150 lbs., and under 1 hour for over 150 lbs.

Under NAVTRANS STS, the Navy will pick up the material at the vendors shipping dock. It is NAVTRANS responsibility to ship OCONUS.

Q23. The manufacturer shall furnish a local engine mounted instrumentation and control panel for each engine. There is currently a Local Control Panel and a Manual Control Panel on the MHC MPDE and only a Local Control Panel on the MHC SSDG. The MCM engines have Local Control Panels in the Main Engine Room and Local controls on the switchboards for the SSDGs. Both have instrumentation panels above the front of the engine. To mount a panel directly on an engine potentially could interfere with maintenance and in the case of the MHC engines it would be mounted inside the enclosure and be inaccessible.

Clarify if the required panel is replacing the existing local control panels or is it adding a panel similar to those on the MHC MPDEs.

Can the panels off engine in locations similar to those of the manual control panel or instrumentation panels?

A23. The Engine Mounted Control Panel does not replace the Local Control Panel in the Machinery Control System (MCS). Most US Navy engines currently incorporate a design feature that allows the operator to manually control

the diesel engines (i.e. speed control) independent of the shipboard control system. The purpose of the Engine mounted control panel is to ensure this capability is available with the replacement engines. The panels shall be positioned so that they don't need to be moved or removed in order to perform routine engine maintenance actions. For MHC application engines, the panels can be mounted in locations similar to those of the existing manual control panel (i.e. inboard and above the engines, outside of the existing enclosures).

Q24. Engines shall meet the power ratings established in paragraph 2.2 of section J attachment 1. Some manufacturers rate their engines at different levels depending on the number of hours of use in a year as well as the number of consecutive hours it can run at that rate in a given period. i.e. An engine can be rated at 800 HP at 1800 RPM in an application that is expected to run 200 hours in a year, and only operate at that load for 1 hour in a 12 hour period. The same engine would be rated at 500 HP at 1800 RPM in an application requiring 2000 hours of operation per year and be allowed to run continuously at that load.

Clarify that the following engine rating requirements are understood correctly.

1. MHC MPDE should be rated to operate continuously at 800 BHP at 1800 RPM in an application expecting to operate 3,200 hours per year, and at 100% of the rated load for one hour in twelve without an increase in engine speed.
2. MHC SSDG should be rated to operate continuously at 425 BHP at 1200 RPM for an application operating 4400 hours in a year, and at 100% of the rated load for one hour in twelve without an increase in engine speed.
3. MCM 3 – 14 MPDE should be rated to operate continuously at 600 BHP at 1800 RPM in an application expecting to operate 3,200 hours per year, and at 100% of the rated load for one hour in twelve without an increase in engine speed.
4. MCM 3 – 14 SSDG should be rated to operate continuously at 550 BHP at 1800 RPM in an application expecting to operate 4,400 hours per year, and at 100% of the rated load for one hour in twelve without an increase in engine speed.
5. MCM 3 – 14 MPDE should be rated to operate continuously at 600 BHP at 2000 RPM in an application expecting to operate 3,200 hours per year, and at 100% of the rated load for one hour in twelve without an increase in engine speed.
6. MCM 1&2 SSDG should be rated to operate continuously at 550 BHP at 1800 RPM in an application expecting to operate 4,400 hours per year. 3. MCM 3 – 14 MPDE should be rated to operate continuously at 600 BHP at 1800 RPM in an application expecting to operate 3,200 hours per year, and at 100% of the rated load for one hour in twelve without an increase in engine speed.

A24. The Government does not concur with the Contractor recommended changes. Continuous rating as defined for the purpose of this solicitation means that the Contractor's engine must be capable of providing the power output at the rated speed for each application as specified in section 2.2, without restriction to the total amount of consecutive hours which can be operated at those power levels. The 110% overload capability requirements in Section J, Attachment 1, however, are modified as follows:

2.2.1 MHC Main Propulsion Diesel Engine (MPDE). The prime mover for this application shall have a continuous rating of 800 bhp at 1800 rpm. The horsepower output corresponds to full power operation of the ship under ship trial conditions. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.2 MHC Ship Service Diesel Generator (SSDG). The prime mover for this application shall have a continuous rating of no less than 425 bhp at 1200 rpm at the engine for driving a generator with rated output of 300KW, 60HZ. The engine shall also be capable of providing 110% overload capacity (467.5 bhp) for one hour of every twelve hours of operation without reduction in engine speed. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.3 MCM 3-14 MPDE. The prime mover for this application shall have a continuous rating of 600 bhp at 1800 rpm. The horsepower output corresponds to full power operation of the ship under ship trial conditions. Two engines shall be capable of operating together driving one of the ship's propeller shafts. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.4 MCM 3-14 SSDG. The prime mover for this application shall have a continuous rating of no less than 550 bhp at 1800 rpm at the engine for driving a generator with rated output of 375KW, 60HZ. The engine shall also be capable of providing 110% overload capacity (605 bhp) for one hour of every twelve hours of operation without reduction in engine speed. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.5 MCM 1&2 MPDE. The prime mover for this application shall have a continuous rating of 600 bhp at 2000 rpm. The horsepower output corresponds to full power operation of the ship under ship trial conditions. Two engines shall be capable of operating together driving one of the ship's propeller shafts. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.6 MCM 1&2 SSDG. The prime mover for this application shall have a continuous rating of no less than 550 bhp at 1800 rpm at the engine for driving a generator with rated output of 375KW, 60HZ. The engine shall also be capable of providing 110% overload capacity (605 bhp) for one hour of every twelve hours of operation without reduction in engine speed. Engine rotation shall be *clockwise* as viewed from the main drive end (flywheel end).

Q25. Section 2.3.1 of the Technical Specification states the propulsion engines will be used 3,200 hours each year while the SSDG units will run 4,400 hours annually. Will you share the load profile or duty cycle for each of the engine requirements? Will both engine MCS units be required to have the same functionality?

A25. The following information provides **average** duty cycle information for each application. Actual duty cycle from ship to ship will vary dependent on specific mission requirements. Although the duty cycle is provided here for information, the Contractor is required to provide engines with continuous ratings as specified in section 2.2 of Section J, Attachment 1. This information shall only be used for maintenance planning and not for rating a proposed engine.

TABLE 1 - MHC CLASS SPEED & HOURS OF OPERATION

Speed (kts)	Percent Time	Estimated Total BHP	Annual Hours UW
0-8	45%	000-350	900
8-10	24%	350-650	480
10-11	30%	650-1000	600
11-12.5	1%	1000-FP	20

The maximum operating time on MHC Class propulsion plants averaged approximately 2000 hours annually.

TABLE 2 - MHC SSDG AVERAGE LOAD & HOURS OF OPERATION

Average Electrical Load	Annual Hours
340 AMPS / 190 kW	2800

The maximum operating time on MHC Class generators averaged approximately 2800 hours annually. This includes in-port operation.

TABLE 3 - MCM CLASS SPEED & HOURS OF OPERATION

Speed (kts)	Percent Time	Estimated Total BHP	Annual Hours UW
0-8	42%	000-350	1260

8-10	28%	350-750	840
10-12	29%	750-1200	870
12-14.5	1%	1200-FP	30

The maximum operating time on MCM Class propulsion plants averaged approximately 3000 hours annually.

TABLE 4 - MCM SSDG AVERAGE LOAD & HOURS OF OPERATION

Average Electrical Load	Annual Hours
430 AMPS / 225 kW	4400

The maximum operating time on MCM Class generators averaged approximately 4400 hours annually. This includes in-port operation.

If the second question is asking "what are the Machinery Control System (MCS) signal input/output differences between the MCM and MHC class ships", the information is provided in Table 6 - MCS Interface (Section J, Attachment 1).

Q26. The technical proposal is limited to 100 pages and 10 fold outs. Will the fold outs be included within the 100 pages or are these additional?

A26. Yes, the 10 fold outs are included within the 100 pages.

Q27. Could you please describe the Machine Control Systems, referenced within the Technical Specification, that we have to integrate with on each vessel-type?

A27. General Description:

The engine(s) for all applications (MCM MPDE; MCM SSDG; MHC MPDE; MHC SSDG) shall be capable of being remotely controlled and monitored by the Machinery Control System (MCS), made up of NT based Workstations, Programmable Logic Controllers and a Fiber Optic Local Area Network (FOLAN). The PLC is the device that contains all of the control logic and interfaces directly with the machinery plant to obtain parameters and issue commands. MCS shall provide remote monitoring and control of the propulsion and ships service diesel generator engines.

MCS Interface requirements are defined in sections 2.5.11 and 2.5.12 of Section J, Attachment 1.

Q28. In Section 2.4.1 of the Technical Specification, it states that the jacket water pre-heater and thermostat shall interface with the existing controller. Does the engine manufacture provide the means of controlling this or is this the responsibility of the Machine Control System?

A28. Section 2.4.1 is specific to MCM MPDEs. The Machinery Control System will provide the means for controlling but the engine manufacturer pre-heater and thermostat must be compatible with the existing controller (i.e. - 450VAC, 60 HZ, 3 phase, 15 amps max.; thermostat 120VAC, 60Hz, 1 phase)

In addition, the engine specification Section J, Attachment 1 is modified to state that the engine manufacturer is required to provide Engine Jacketwater pre-heater and thermostat and Lubricating Oil pre-heater and thermostat for all four applications (i.e. MCM MPDE, MCM SSDG, MHC MPDE and MHC SSDG) which shall interface with the existing controllers. The existing controller requires pre-heaters which can operate with 450VAC, 60Hz, 3phase, 15 amps max. and the thermostat shall operate using 120VAC, 60Hz, 1 phase power.

Q29. Section 2.5.11 states that prior to engine clutched in operation, the engine control system shall provide clutch logic scenarios in program control mode. Are these standard I/O signals or does this require messages being sent to the MCS?

A29. These are standard I/O signals. The engine manufacturer provided speed control system must be capable of providing the logic described in paragraph 2.5.11 which includes inputs from the MCS to the Engine Manufacturer provided speed control system and outputs from the Engine Manufacturer provided speed control system to the MCS.

Q30. Section 2.5.4 stipulates instrumentation gage valves and test valves. Electronic technology has rendered these obsolete. Are these obsolete types of instrumentation a firm requirement?

A30. Root valves, Gage valves and test connections are required if using tubing or piping from the parameter sensing point on the engine to a transducer or gage. If tubing is not required between the parameter sensing point on the engine and the transducer or gage, then isolation, root or test valves are not required. A means of testing the gage or transducer must be provided regardless of the type of instrumentation provided.

Q31. Just to verify, within the Solicitation on page 87 of 101 it states the Technical Proposal should be double spaced. Are we allowed to deviate from this (i.e. single spaced)?

A31. Proposal must be double-spaced - no deviations allowed.

Q32. Are there any NOFORN requirements attached to this solicitation?

A32. There are no restrictions on foreign companies submitting a proposal in response to the solicitation.

Q33. Beginning with CLIN 0009AU and lasting through 0009BM, please provide a clear definition of "Replenishment Spare Parts."

A33. Replenishment spares are defined in paragraph 2.9.2.2 of Section J, Attachment 1:
"Replenishment or Interim spares provides the Ship with replacement onboard repair parts when initial outfit spares are used. Interim spares are required until the Navy has reached Material Support Date (MSD). The MSD is typically reached approximately 24 months after submittal of provisioning."

Therefore, replenishment spares are the shipboard repair parts that the ship would order when "Initial Outfitting" spares are consumed. Initial outfitting spares provide the ship with enough parts to support 90 days at sea immediately following engine installation. Replenishment Spares shall provide enough parts/consumables for an additional 90 days at sea.

Additional definitions for Initial Outfitting, Major Overhaul and Minor Overhaul are also defined in section 2.9 of Section J, Attachment 1.

Q34. Please provide the list of approved or Navy recognized testing facilities for shock requirements MIL-S-901D, Environmental (noise) testing, and Magnetic Signature testing.

A34. The attached Addendum to NAVSEAINST 9491.1C is the latest list of approved shock test facilities.

There are no lists of Navy approved or recognized Magnetic Signature or Noise testing facilities. However, if an offeror would like to obtain services from Navy facilities, the following contact information is provided:

Magnetic Signature testing - Naval Surface Warfare Center Carderock Division
Code 754 Bldg. 80 Room 316
9500 MacArthur Blvd
West Bethesda, MD 20817
POC: Ms. Debra Whelan, 301-227-7034, whelandw@nswccd.navy.mil

Acoustic testing - Naval Surface Warfare Center Carderock Division
Propulsion and Power Generation Acoustics Branch, Code 993
1000 Kitty Hawk Avenue

Philadelphia, PA 19112-1403

POC: Thomas M. Miller 215-897-8929, millertm@nswccd.navy.mil

Q35. Exhibit A, block 4 references several standards such as Data Item Descriptions, MIL specs, and IE's. We have searched for these standards and have had limited success. The Data Item Descriptions are especially difficult to find and are often are somewhat dated. We request that the applicable standards be posted so we are assured of reviewing the most current standards. Alternatively, if there is a recommended website for the source of these standards, please advise.

A35. <https://www.afmc-mil.wpafb.af.mil/HQ-AFMC/EN/enp/dids/didspage.htm> This site provides DIDs.

<http://assist2.daps.dla.mil/quicksearch/> This site provides DIDs and Specs/standards.

Q36. The RFP and attachments are posted in PDF format. We request that they be provided as a MS Word attachment. This would allow us to assure compliance to the Solicitation and Technical Specification.

A36. All documents are posted to NECO/FEDBIZOPS in a "locked" format, whether it is MS Word or PDF. The DOD Standard Procurement System produces a "locked" RFP in MS Word, so an RFP document that can be manipulated is not produced.

Q37. Is it the intention of the Navy to install the First Article Units into the first vessels scheduled for engine replacement? What is the intended use of the First Article Units after completion of all tests?

A37. The First Article Unit will not be used for the first installation. The engines for the first installation will be procured under CLINs 0002 and 0003. On completion of testing these units will be returned to new condition and turned over to the Navy.

Q38. Section B requests pricing for the various items. Our assumption is that the unit prices requested should be based on the Estimated Maximum Production Quantity as shown in section B. Is our assumption correct? Prices may be much more expensive if these prices are based on a minimum quantity.

A38. The resultant contract will be an indefinite delivery, indefinite quantity contract. Although the Government may order up to the maximum quantity as cited in the clause entitled "Minimum and Maximum Quantities" on page 30 of the Request for Proposal, the Government is only obligated to order the minimum quantity under any resultant contract.

Q39. CLIN 0010 CB is described as Operating Parameters and Sequencing Plan. We need a definition for this. What is the intention? What is the required deliverable?

A39. Operating Parameters include all engine temperatures, pressures, fluid levels, speeds, power outputs listed in Table 6 of Section J, Attachment 1. The deliverable is a table of information that shall include allowable ranges, limits, and restrictions for each parameter listed in a tabular format.

The Sequencing Plan is a series of contractor provided procedures for aligning the engine for operation, securing the engine and casualty control procedures (i.e. for Low Lube Oil Pressure, Overspeed, Crankcase Explosion, Fuel Oil Leak, etc) and any other operational procedures required to operate the engine.

The intention is to utilize the contractor documented procedures for developing the Navy shipboard Engineering Operational Sequencing System (EOSS) which consists of Engineering Operational Procedures (EOP) and Engineering Operational Casualty Control (EOCC) procedures.

Q40. Regarding Past Performance and Attachment J7. - Is it the intention of the Navy to send this Past Performance Questionnaire to the Customers as identified in our proposal, section L5? Or, should we send this directly to the Customers and request their submission directly to the Navy? Please advise.

A40. The Navy will send out Attachment 7 as required. As stated in Section L of the solicitation, the Navy may review relevant past performance information other than CPARS by the use of Attachment 7 including information from sources other than those identified by the Offeror.

Q41. Reference Section F, Clauses incorporated by reference and Required Delivery Schedule - For production units, CLIN's 2-7, Is the Required Delivery Schedule (60 days after date of order) in reference to a) the time from Date of Order to Acceptance at Origin (section E) or b) the time from Date of Order to Delivery?

A41. The Required Delivery Schedule (60 days after date of order) is the time from Date of Order to Acceptance at Origin.

2. The following clause is added to Section L of the solicitation , "Instructions, Conditions and Notices to Offerors:

PROPOSALS THAT INVOLVE MODIFICATION TO EXISTING SHIP SYSTEMS

Offerors can propose solutions that require modification of existing shipboard systems as long as the end result is achieved and is clearly defined within the proposal. The successful offeror will be required to perform any such modification of existing shipboard systems.

Proposals that include such modifications to existing ship systems shall include technical details of the required modification in the technical proposal. All costs to perform any such modification of existing ship systems must be included in the offeror's proposal."

3. Paragraphs (e) and (f) of the clause entitled "**COST PROPOSAL: SELECTED COST DATA FOR INDEFINITE DELIVERY CONTRACTS**" " cited on pages 86 and 87 of the solicitation are corrected to cite as follows:

(e) OTHER - (1) Direct Cost - Identify any other direct cost elements being proposed which are not included above but are applicable to your cost proposal, e.g., royalties, Facilities Capital Cost of Money, special tooling, travel, computer usage, etc. Include the basis for the proposed amount. (2) Indirect cost - Identify any other indirect cost element being proposed which has not been included above and identify the various cost elements for which the rate is applied.

(f) GENERAL & ADMINISTRATIVE EXPENSE - Identify the G&A rate(s) and the total G&A cost proposed and identify the various cost elements for which the G&A is being applied.

4. The following changes are made to Attachments 2,3, 4 and 8 of the solicitation:

a. Attachment 2, paragraph 6.1:

6.1 Packaging and Marking

Any national stock numbered (NSN) item (required for immediate use and/or direct installation) or part number item (authority granted to ship without NSN) shall be packaged and packed in accordance with the most recent version of MIL-STD-2073-1, ASTM-D-3951, Standard Practice for Commercial Packaging, for all shipments to a continental United States (CONUS) Government activity or Contractor-owned facility. When considered the equivalent, Contractor's commercial packaging and packing procedure may be used. All items destined for overseas shipment or storage in Government custody shall be packaged in accordance with the most recent version of MIL-STD-2073-1, Level A. criteria shall mark them in accordance with the most recent version of MIL-STD-129P, "Marking for Shipment and Storage". A specific instance where use of ASTM-D-3951 would be allowed shipments in CONUS for CASREP/IPG1

b. Attachment 3, par 6.1:

6.1 Packaging and Marking

Any national stock numbered (NSN) item (required for immediate use and/or direct installation) or part number item (authority granted to ship without NSN) shall be packaged and packed in accordance with the most recent version of MIL-STD-2073-1, ASTM-D-3951, Standard Practice for Commercial Packaging, for all shipments to a continental United States (CONUS) Government activity or Contractor-owned facility. When considered the equivalent, Contractor's commercial packaging and packing procedure may be used. All items destined for overseas shipment or storage in Government custody shall be packaged in accordance with the most recent version of MIL-STD-2073-1, Level A. criteria shall mark them in accordance with the most recent version of MIL-STD-129P, "Marking for Shipment and Storage". A specific instance where use of ASTM-D-3951 would be allowed shipments in CONUS for Casualty Report/ Issue Priority Group 1(CASREP/IPG1) requisitions.

c. Attachment 4, par 5.1:

5.1 Packaging and Marking

Any national stock numbered (NSN) item (required for immediate use and/or direct installation) or part number item (authority granted to ship without NSN) shall be packaged and packed in accordance with the most recent version of MIL-STD-2073-1, ASTM-D-3951, Standard Practice for Commercial Packaging, for all shipments to a continental United States (CONUS) Government activity or Contractor-owned facility. When considered the equivalent, Contractor's commercial packaging and packing procedure may be used. All items destined for overseas shipment or storage in Government custody shall be packaged in accordance with the most recent version of MIL-STD-2073-1, Level A. criteria shall mark them in accordance with the most recent version of MIL-STD-129P, "Marking for Shipment and Storage". A specific instance where use of ASTM-D-3951 would be allowed shipments in CONUS for Casualty Report/ Issue Priority Group 1(CASREP/IPG1) requisitions.

d. Attachment 8, par 2.1:

2.1 MILITARY STANDARDS.

MIL-DTL-31000 Technical Data Packages (TDPs)

MIL-STD-129P Marking for Shipment and Storage

MIL-STD-2073.1 MIL-STD-2073-1D Procedures for Development and Application of Packaging Requirements for DOD Material

ANSI MK 10.8 Material Handling Standard

5. Sections 2.2.1 through 2.2.6 of Attachment 1 to the solicitation are changed to cite as follows:

2.2.1 MHC Main Propulsion Diesel Engine (MPDE). The prime mover for this application shall have a continuous rating of 800 bhp at 1800 rpm. The horsepower output corresponds to full power operation of the ship under ship trial conditions. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.2 MHC Ship Service Diesel Generator (SSDG). The prime mover for this application shall have a continuous rating of no less than 425 bhp at 1200 rpm at the engine for driving a generator with rated output of 300KW, 60HZ. The engine shall also be capable of providing 110% overload capacity (467.5 bhp) for one hour of every twelve hours of operation without reduction in engine speed. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.3 MCM 3-14 MPDE. The prime mover for this application shall have a continuous rating of 600 bhp at 1800 rpm. The horsepower output corresponds to full power operation of the ship under ship trial conditions. Two engines shall be capable of operating together driving one of the ship's propeller shafts. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.4 MCM 3-14 SSDG. The prime mover for this application shall have a continuous rating of no less than 550 bhp at 1800 rpm at the engine for driving a generator with rated output of 375KW, 60HZ. The engine shall also be capable of providing 110% overload capacity (605 bhp) for one hour of every twelve hours of operation without reduction in engine speed. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.5 MCM 1&2 MPDE. The prime mover for this application shall have a continuous rating of 600 bhp at 2000 rpm. The horsepower output corresponds to full power operation of the ship under ship trial conditions. Two engines shall be capable of operating together driving one of the ship's propeller shafts. Engine rotation shall be *counterclockwise* as viewed from the main drive end (flywheel end).

2.2.6 MCM 1&2 SSDG. The prime mover for this application shall have a continuous rating of no less than 550 bhp at 1800 rpm at the engine for driving a generator with rated output of 375KW, 60HZ. The engine shall also be capable of providing 110% overload capacity (605 bhp) for one hour of every twelve hours of operation without reduction in engine speed. Engine rotation shall be *clockwise* as viewed from the main drive end (flywheel end).

6. The following statement to par 2.4 "Interface Requirements" of Attachment 1:

If new reduction gears are installed, the numbers of teeth on meshing elements shall have no common factors.

7. Section 2.4.1 of Attachment 1 is modified to include the following:

The engine manufacturer is required to provide Engine Jacketwater pre-heater and thermostat and Lubricating Oil pre-heater and thermostat for all four applications (i.e. MCM MPDE, MCM SSDG, MHC MPDE and MHC SSDG) which shall interface with the existing controllers. The existing controller requires pre-heaters which can operate with 450VAC, 60Hz, 3phase, 15 amps max. and the thermostat shall operate using 120VAC, 60Hz, 1 phase power.

Attachments:

Readable graphs in MS Word format (blue data points on white background)

Index of M Class Re-Engine Drawings

Additional drawings added to Attachment 6:

MCM 180-6134097 "MAIN PROPULSION ENG & REDUCTION GEAR FDNS"

233-6134142 "PROPULSION ENG / REDUCTION GEAR SUB-BASE (S)"

180-6134100 "SSDG FOUNDATIONS"

180-6900415 "SSDG RAFT MODS"

VENDOR DWG W24500037 "BASE FOR DIESEL / GEN WELDMENT"

Addendum to NAVSEAINST 9491.1C